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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,809	01/13/2004	John Ng	50325-0831	5414

29989 7590 10/04/2007

HICKMAN PALERMO TRUONG & BECKER, LLP
2055 GATEWAY PLACE
SUITE 550
SAN JOSE, CA 95110

EXAMINER	
RICHARDSON, THOMAS W	

ART UNIT	PAPER NUMBER
4121	

MAIL DATE	DELIVERY MODE
10/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/757,809	NG ET AL.	
	Examiner	Art Unit	
	Thomas Richardson	2109	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 January 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :1 June 2004, 9 June 2004, 10 June 2005, 4 December 2006.

DETAILED ACTION

Claims 1-39 are pending for examination.

Claims 1-39 are rejected.

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: In figure 1A, Switch 106, CPE B 170, DLCI 21, and DLCI 22 are shown in the figure but are not described in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: page 30, paragraph [0100] contains an apparent misspelling of the word "tried." In step (vi), it appears the word "tired" should be "tried."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Regarding claims 1, 11, 12, 22, 30, the phrase "the device" (claim 1, line 10; claim 11, line 13; claim 12, line 12; claim 22, line 10; claim 30, line 15) renders the claim indefinite because it is unclear what device the phrase points to. Examiner assumes the phrase "the device" points to the device of the preamble, as opposed to the device terminating the virtual circuit, as stated in claim 1, line 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 4, 7, 8, 9, 12, 14, 15, 18, 19, 20, 22, 24, 25, 28, 29, 30, 32, 33, 36, and 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0078999, Lund, et al and US 6 826 611, Arndt.

5. As per claims 1, 12, 22, and 30, Lund teaches a method, computer-readable medium, and an apparatus for provisioning a device operable with internet protocol (IP) in a virtual circuit network (abstract, where method and apparatus work in a virtual circuit with DSL), the method, computer-readable medium, and apparatus comprising the computer-implemented steps of:

receiving a list of identifiers corresponding to virtual circuits from a configuration interface for the virtual network (page 2, paragraph [0020], wherein the probe values are accessed via the "VC Table"); and

applying each identifier to individual instances of interface configuration commands until connectivity with a remote device is established (page 2, paragraph [0020], wherein the probe values test for connectivity to a remote device, also page 3, Table 1, where different probe values represent different connectivity paths), comprising the steps of:

testing the virtual circuit corresponding to the identifier selected from the list for connectivity with the remote device (page 2, paragraph [0020], wherein the probes test for connectivity); and

if the virtual circuit provides connectivity to the remote device, then choosing the virtual circuit corresponding to the selected identifier for connecting to the remote device, otherwise, iteratively applying the above

steps for a next identifier in the list until the list is exhausted (page 4, paragraph [0036] shows that if connectivity is established, the virtual circuit is set up, also, that a request may start after the probe is finished.

Lund does not teach, but Arndt teaches a system for setting up a device IP address with on a local subnet. In Arndt's device, a client connects with another remote host, and in doing so, the local host establishes a local IP address, following Arndt's method, which includes:

iteratively applying configuration commands until connectivity is established (abstract, where the address is decremented and tested until connectivity is established);

obtaining an IP address for a device terminating the virtual circuit corresponding to an identifier selected from the list (Column 5, lines 37-45, wherein the device uses ARP to discover local IP configurations of Arndt); and

determining an IP address for the device (abstract, where the method and apparatus iterates until a proper address is found).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use Arndt's method of obtaining an IP address with Lund's system of testing for connectivity, as the device connecting to the network would need a new IP address with its connection. Arndt's invention allows a device to connect automatically to a network with a valid IP address and subnet (abstract), which makes the process easier and more efficient.

6. As per claims 3, 14, 24, and 32: the combination of Lund and Arndt teaches the method, computer-readable medium, and apparatus as recited in Claims 1, 12, 22, and 30, wherein the virtual circuit network comprises an Asynchronous Transfer Method (ATM) relay network (page 2, paragraph [0015] describes the use of the ATM protocol in high-speed networks), and wherein the step of receiving a list of identifiers corresponding to virtual circuits from the configuration interface for the virtual circuit comprises:

> receiving an Interim Local Management Interface (ILMI) message comprising a list of at least one of a plurality of Virtual Channel Identifiers or Virtual Path Identifiers (VCI/VPI) in the network (Lund teaches this limitation. Page 2, paragraph [0019] teaches that ILMI messages containing configurations may be used to automatically configure the virtual circuit).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use this format. ILMI messages, as shown by Lund, are given as an ATM Forum Specification for auto-configuration of virtual circuits (page 2, paragraph [0019]). This method, as well known in the art, would be used to transmit virtual circuit information.

7. As per claims 4, 15, 25, and 33, the combination of Lund and Arndt teaches the method, computer-readable medium, and apparatus as recited in Claims 1, 12, 22, and 30, wherein the step of iteratively applying each identifier to individual instances of interface configuration commands until the connectivity with a remote device is established further comprises:

iteratively incorporating successive virtual circuit identifiers from the list into dynamically constructed commands to configure an interface to the virtual circuit network and successively applying the commands to the interface (Lund teaches this limitation. Page 3, paragraph [0027] teaches that the configuration information is retrieved from a table and the virtual circuit is configured accordingly. Lund does not teach this process done iteratively, but Arndt teaches obtaining an address iteratively (abstract)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use this combination, as the iterative process as given by Arndt allows the system to explore all addresses within a subnet (Column 4, lines 45-55). This would have been obvious in Lund's system, as it would allow all circuits in a table to be tested for connectivity, while those not used could be disabled (page 3, paragraph [0029]).

8. As per claims 7, 18, 28, and 36, the combination of Lund and Arndt teaches the method, computer-readable medium, and apparatus as recited in Claims 1, 12, 22, and 30, wherein the step of determining an IP address for the device comprises the steps of:

determining a netmask for the device, wherein the subnet for the device is smaller than or equal to a subnet of the device terminating the virtual circuit corresponding to the selected identifier (Arndt teaches this limitation. Column 4, lines 39-45 teach that a narrow subnet is either manually entered or selected by monitoring network traffic); and

determining an IP address for the device valid in the subnet of the device based upon the address of the device terminating the virtual circuit (Arndt teaches this

limitation. Column 4, lines 57-63 teach that the device selects an IP address valid within the selected subnet).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include this feature in the combination. As a device connects in a virtual circuit, it must have an IP address valid within the same subnet at the device it is trying to connect to. Arndt's feature would allow a device to connect on any network, logical or virtual, with a valid IP and subnet address (Column 5, lines 52-61, where the device chooses a preferred connection within its subnet through routing protocols).

9. As per claims 8, 19, 29, and 37, the combination of Lund and Arndt teaches the method, computer-readable medium, and apparatus as recited in Claims 7, 18, 28, and 36, wherein determining a netmask for the device and determining an IP address for the device valid in the subnet of the device based upon the address of the device terminating the virtual circuit corresponding to the selected identifier, further comprises the steps of:

selecting a proposed netmask for a proposed subnet of smallest available size (Arndt teaches this limitation. Column 4, lines 43-45, where the device selects a small subnet to first try addresses on);

testing if an IP address for the device terminating the virtual circuit corresponding to the selected identifier is valid within the proposed subnet (Arndt teaches this limitation. Column 4, lines 47-50, where the device tests for validity within the subnet by monitoring traffic);

if the IP address for the device terminating the virtual circuit is valid within the proposed subnet, then performing the following steps:

adding 1 to the IP address of the device terminating the virtual circuit to form a first result, and testing whether the first result is a valid address;

if the first result is a valid address, choosing the first result as the IP address for the device, otherwise, subtracting 1 from the IP address of the device terminating the virtual circuit to form a second result and choosing the second result as the IP address for the device (Arndt teaches this limitation. Arndt's method, of decrementing IP addresses to find a valid IP address for the device, provides the same functionality. The device will choose the first address it deems to be a valid address);

otherwise, increasing the size of the proposed subnet and iteratively perform the above steps beginning with the testing step (Column 4, lines 45-56, where the subnet size increases if a valid address is not found within the subnet).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include this feature in the combination. As a device connects in a virtual circuit, it must have an IP address valid within the same subnet at the device it is trying to connect to. Arndt's feature would allow a device to connect on any network, logical or virtual, with a valid IP and subnet address (Column 5, lines 52-61, where the device chooses a preferred connection within its subnet through routing protocols). The method

of attaining that IP address in an incremental fashion would supply a guaranteed result, as it would continue until it gets to a valid address.

10. As per claims 9, 20, and 38, the combination of Lund and Arndt teaches a method as recited in Claims 7, 19, and 36 wherein determining a netmask for the device and determining an IP address for the device valid in the subnet of the device and based upon the address of a device terminating the virtual circuit corresponding to the selected identifier, further comprises the steps of:

determining a largest netmask less than or equal to 30 bits (255.255.255.252) such that ((ip_address of the device_terminating_VC & ~netmask) != 0) && ((ip_address of the_device_terminating_the VC I netmask) != ~0) is true (Arndt teaches this limitation. Figure 5 and accompanying description show that requests are sent to the broadcast address. In addition, it is well known in the art that no device can use the broadcast or network address);

adding 1 to the IP address of the device terminating the virtual circuit to form a first result, and testing whether the first result is a valid address in the netmask;

if the first result is a valid address, choosing the first result as the IP address for the device, otherwise, subtracting 1 from the IP address of the device terminating the virtual circuit to form a second result and choosing the second result as the IP address for the device (Arndt teaches this limitation. Arndt's method, of decrementing IP addresses to find a valid IP address for the device, provides the same functionality. The device will choose the first address it deems to be a valid address).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include this feature in the combination. As a device connects in a virtual circuit, it must have an IP address valid within the same subnet at the device it is trying to connect to. Arndt's feature would allow a device to connect on any network, logical or virtual, with a valid IP and subnet address (Column 5, lines 52-61, where the device chooses a preferred connection within its subnet through routing protocols). The method of attaining that IP address in an incremental fashion would supply a guaranteed result, as it would continue until it gets to a valid address.

Claims 2, 10, 13, 21, 23, 31, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lund and Arndt as applied to claims 1, 12, 22, and 30 above, and further in view of WO 1999/041937, Reece et al.

11. As per claims 2, 13, 23, and 31, the combination of Lund and Arndt teaches a method, computer-readable medium, and apparatus as recited in claim 1.

Reece teaches a system for establishing a virtual circuit through a packet switched network wherein the virtual circuit comprises a frame relay network (page 10, lines 19-22, where the invention as described could be used in any packet switched network, such as frame relay), and wherein the step of receiving a list of identifiers corresponding to virtual circuits from the configuration interface for the virtual circuit network further comprises:

> receiving a Local Management Interface (LMI) message comprising a list of at least one of a plurality of Data Link Connection Identifiers (DLCIs) in the network (by suggesting the use of a frame relay network, Reece implies the use of the

DLCI messages, as they are the equivalent of the VCI/VPI messages in the ATM network taught on page 4, lines 10-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use this method in a frame relay network. In order for a system to connect to another, it must have the destination address, including a path representation to communicate with that address. It is well known in the art that for a packet-switched network, the means of addressing in routing must be included in each packet, and for a frame relay network as suggest by Reece, a common method would be using DLCI, as an equivalent to the VCI/VPI of an ATM network.

12. As per claims 10, 21, and 39, the combination of Lund and Arndt teaches a method, computer readable medium, and apparatus as recited in claim 1.

Reece teaches a system for establishing a virtual circuit through a packet switched network which comprises:

automatically communicating an inventory of all interfaces associated with the device to the remote device upon establishing connectivity with the remote device (page 4, lines 18-24, where the component supplies a list of destination terminals which are associated with the terminal).

It would have been obvious to one of ordinary skill in the art at the time of the invention to communicate this list, as it would provide all devices with terminals that can be accessed. This would allow the devices to set up the virtual circuit automatically, making it more efficient, as there would not be need of a person to manage the system (Reece, page 1, lines 21-23).

13. Claims 5, 16, 26, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lund and Arndt as applied to claims 1, 12, 22, and 30 above, and further in view of Comer (*Computer Networks and Internets*).

As per claims 5, 16, 26, and 34, the combination of Lund and Arndt teaches a method, computer-readable medium, and apparatus as recited in claims 1, 12, 22, and 30, wherein the step of testing a virtual circuit corresponding to an identifier selected from the list for connectivity with a remote device further comprises:

pinging a configuration server (Comer teaches that it is common in the art of computer networks to ping a server to establish proof of connectivity (255)).

This would have been obvious to one of ordinary skill in the art at the time of the invention, as it was a common method to check for connectivity in any network.

Claims 6, 17, 27, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lund and Arndt as applied to claims 1, 12, 22, and 30 above, and further in view of OpenROUTE Networks ("Using the ARP and Inverse ARP Protocols").

14. As per claims 6, 17, 27, and 35, the combination of Lund and Arndt teaches a method, computer-readable medium, and apparatus as recited in claims 1, 12, 22, and 30, wherein the step of obtaining an IP address for the device terminating the virtual circuit corresponding to the selected identifier further comprises:

forming an Inverse Address Resolution Protocol Request (IARP);

sending the IARP request to a device terminating the virtual circuit; and

receiving from the device terminating the virtual circuit an IP address (OpenROUTE teaches that using the IARP protocol as defined by RFC 1293 allows a device to learn the protocol addresses of other devices (page 2)).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use this protocol as a way of discovering the addresses of connected devices. In Lund's system, a device connects using only the local address, and in order to function properly on the local network, it must have a local IP address as well. In addition, Arndt's system requires the IP address of a terminating device. In order to give the device a local address, the device must first have the IP address of other connected devices, and IARP, as stated by OpenROUTE, allows for a device to discover all protocol addresses, including IP (page 2).

15. Claim 11 rejected under 35 U.S.C. 103(a) as being unpatentable over US 2003/0078999, Lund, US 6 826 611, Arndt, WO 1999/041937, Reece

16. , and OpenROUTE Networks ("Using the ARP and Inverse ARP Protocols").

17. As per claim 11, Lund teaches a method of provisioning a device operable with internet protocol (IP) in a virtual circuit network (abstract, where method and apparatus work in a virtual circuit with DSL), the method comprising the computer-implemented steps of:

receiving a list of virtual circuit identifiers in the network (page 2, paragraph [0020], wherein the probe values are accessed via the "VC Table"); and applying each identifier to individual instances of interface configuration commands until connectivity with a remote device is established (page 2,

paragraph [0020], wherein the probe values test for connectivity to a remote device, also page 3, Table 1, where different probe values represent different connectivity paths).

Reece teaches a system for establishing a virtual circuit through a packet switched network wherein the virtual circuit comprises a frame relay network (page 10, lines 19-22, where the invention as described could be used in any packet switched network, such as frame relay), and wherein the step of receiving a list of identifiers corresponding to virtual circuits from the configuration interface for the virtual circuit network further comprises:

receiving a Local Management Interface (LMI) message comprising a list of at least one of a plurality of Data Link Connection Identifiers (DLCIs) in the network (by suggesting the use of a frame relay network, Reece implies the use of the DLCI messages, as they are the equivalent of the VCI/VPI messages in the ATM network taught on page 4, lines 10-16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use this method in a frame relay network. In order for a system to connect to another, it must have the destination address, including a path representation to communicate with that address. It is well known in the art that for a packet-switched network, the means of addressing in routing must be included in each packet, and for a frame relay network as suggest by Reece, a common method would be using DLCI, as an equivalent to the VCI/VPI of an ATM network.

Arndt teaches a system for tunneling a connection through various network technologies, allowing the formation of a virtual LAN. In Lee's device, a host connects with another remote host, and in doing so, the local host follows Lee's method, which includes:

iteratively, comprising the steps of:

determining an IP address for the device, further comprising the steps of:

selecting a proposed netmask for a proposed subnet of smallest available size (Column 4, lines 43-45, where the device selects a small subnet to first try addresses on);

testing if the IP address of the device terminating the virtual circuit is valid within the proposed subnet (Column 4, lines 47-50, where the device tests for validity within the subnet by monitoring traffic);

if the IP address of the device terminating the virtual circuit is valid within the proposed subnet, then performing the following steps:

adding 1 to the IP address of the device terminating the virtual circuit to form a first result, and testing whether the first result is a valid address;

if the first result is a valid address, choosing the first result as the IP address for the device, otherwise, subtracting 1 from the IP address of the device terminating the virtual circuit to form a second result and choosing the second result as the IP address for the device (Arndt teaches this limitation.

Arndt's method, of decrementing IP addresses to find a valid IP address for the device, provides the same functionality. The device will choose the first address it deems to be a valid address);

otherwise, increasing the size of the proposed subnet and iteratively performing the above steps for the next identifier in the list until the list is exhausted (Column 4, lines 45-56, where the subnet size increases if a valid address is not found within the subnet).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use Arndt's method of obtaining an IP address with Lund's system of testing for connectivity and Reece's frame relay, as the device connecting to the network would need a new IP address with its connection. Arndt's invention allows a device to connect automatically to any, including the packet-switched, such as frame relay, network with a valid IP address and subnet (abstract), which makes the process easier and more efficient.

OpenROUTE teaches a method of establishing the protocol addresses of a device containing the steps of:

obtaining an IP address for a device terminating the virtual circuit, further comprising the steps of:

forming an Inverse Address Resolution Protocol (IARP) request;

sending the IARP request to device terminating the virtual circuit;

receiving from the device terminating the virtual circuit an IP address(OpenROUTE teaches that using the IARP protocol as defined by RFC 1293 allows a device to learn the protocol addresses of other devices (page 2));

It would have been obvious to one of ordinary skill in the art at the time of the invention to use this protocol as a way of discovering the addresses of connected devices. In Lund's system, a device connects using only the local address, and in order to function properly on the local network, it must have a local IP address as well. In addition, Arndt's system requires the IP address of a terminating device. In order to give the device a local address, the device must first have the IP address of other connected devices, and IARP, as stated by OpenROUTE, allows for a device to discover all protocol addresses, including IP (page 2).

Reece teaches a system for establishing a virtual circuit through a packet switched network which comprises:

automatically communicating an inventory of all interfaces associated with the device to the remote device upon establishing connectivity with the remote device (page 4, lines 18-24, where the component supplies a list of destination terminals which are associated with the terminal).

It would have been obvious to one of ordinary skill in the art at the time of the invention to communicate this list, as it would provide all devices with terminals that can be accessed. This would allow the devices to set up the virtual circuit automatically, making

it more efficient, as there would not be need of a person to manage the system (Reece, page 1, lines 21-23).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 7 142 530, Chewning, III et al teaches a network management system for an expanded local network, where devices connect over a virtual network.

US 6 882 626, Marathe et al teaches a system and method for automated switching of data traffic in a network.

US 7 243 160, Brahmaroutu teaches a method for determining multiple paths between ports in a switched fabric.

US 7 230 949, Bharali et al teaches a system and method for automatic discovery and verification of optimal paths in a meshed overlay network.

US 6 714 972, Lee et al teaches a method and apparatus that stores and distributes connection information for devices in a network.

US 2005/0193103, Drabik teaches a method and apparatus for automatic configuration and management of a virtual network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Richardson whose telephone number is (571) 270-5006. The examiner can normally be reached on Monday through Thursday, 8am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi Arani can be reached on (571) 272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TR

Taghi Arani

TAGHI ARANI
PRIMARY EXAMINER

10/1/07